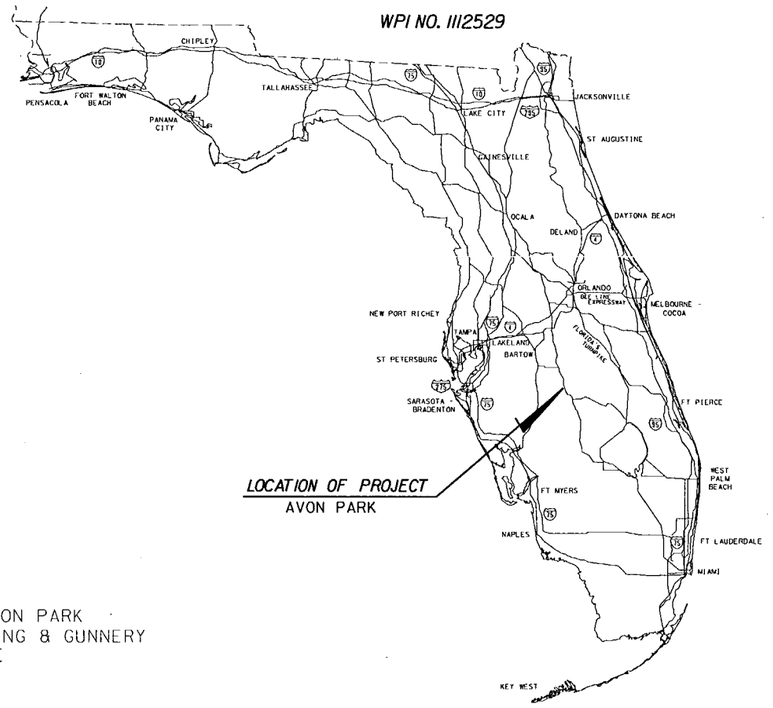
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

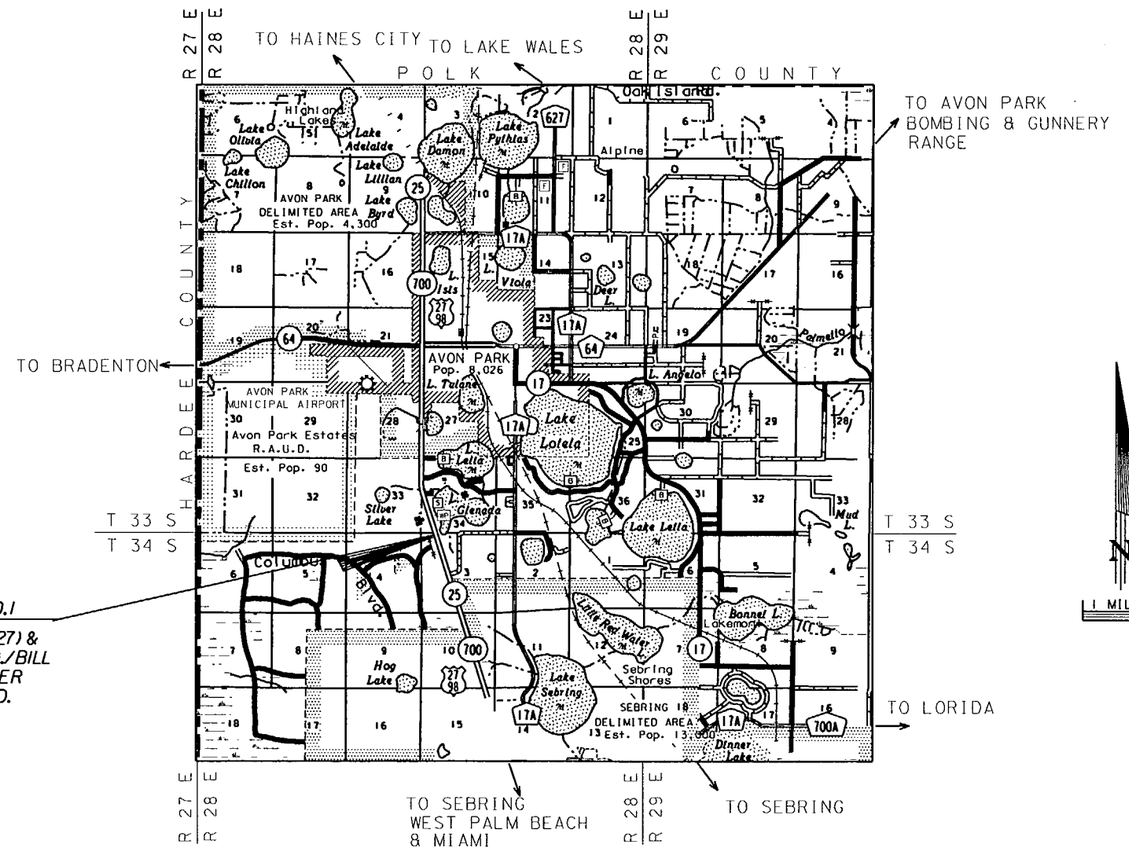
FINAL "AS-BUILT" PLANS

WPI NO. 1112529

FINANCIAL PROJECT ID 194510-1-52-01
STATE PROJECT NO. 09030-3501
HIGHLANDS COUNTY
STATE ROAD NO. 25 (U.S. 27) AT
COLLEGE ROAD/BILL SACHSENMAIER MEMORIAL ROAD
SIGNALIZATION PLANS

INDEX OF SIGNALIZATION PLANS





SIGNALIZATION SHOP DRAWINGS TO BE SUBMITTED TO:
ARTHUR L. SHIPLEY, P.E.
COMPREHENSIVE ENGINEERING SERVICES INC.
201 S. ORANGE AVENUE, SUITE 1300
ORLANDO, FLORIDA 32801

PLANS PREPARED BY:

CES Comprehensive Engineering Services, Inc.
COMPREHENSIVE ENGINEERING SERVICES INC.
201 S. ORANGE AVENUE, SUITE 1300
ORLANDO, FLORIDA 32801
CERTIFICATE OF AUTHORIZATION NO. 7862
(407) 423-1600
CONTRACT NO. C-6867
VENDOR NO. 59-3472222

GOVERNING STANDARDS AND SPECIFICATIONS
FLORIDA DEPARTMENT OF TRANSPORTATION
ROADWAY AND TRAFFIC DESIGN STANDARDS
DATED JANUARY 2000, AND
STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE
CONSTRUCTION DATED 2000,
AS AMENDED BY CONTRACT DOCUMENTS

REVISIONS

SIGNALIZATION SHEET T-2 (REVISED 11-00)

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

Arthur L Shipley
#49398
11/30/00

REVISIONS		
DATE	BY	DESCRIPTION

SIGNALIZATION PLANS
ENGINEER OF RECORD: ARTHUR L. SHIPLEY, P.E.
DATE: 11/16/00
P.E. NO.: 49398

FISCAL YEAR	SHEET NO.
01	T-1

FDOT PROJECT MANAGER : ROBERT F. HENRY, J.R.

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

WPI NO. 1112529

FINANCIAL PROJECT ID 194510-1-52-01
STATE PROJECT NO. 09030-3501
HIGHLANDS COUNTY
STATE ROAD NO. 25 (U.S. 27) AT
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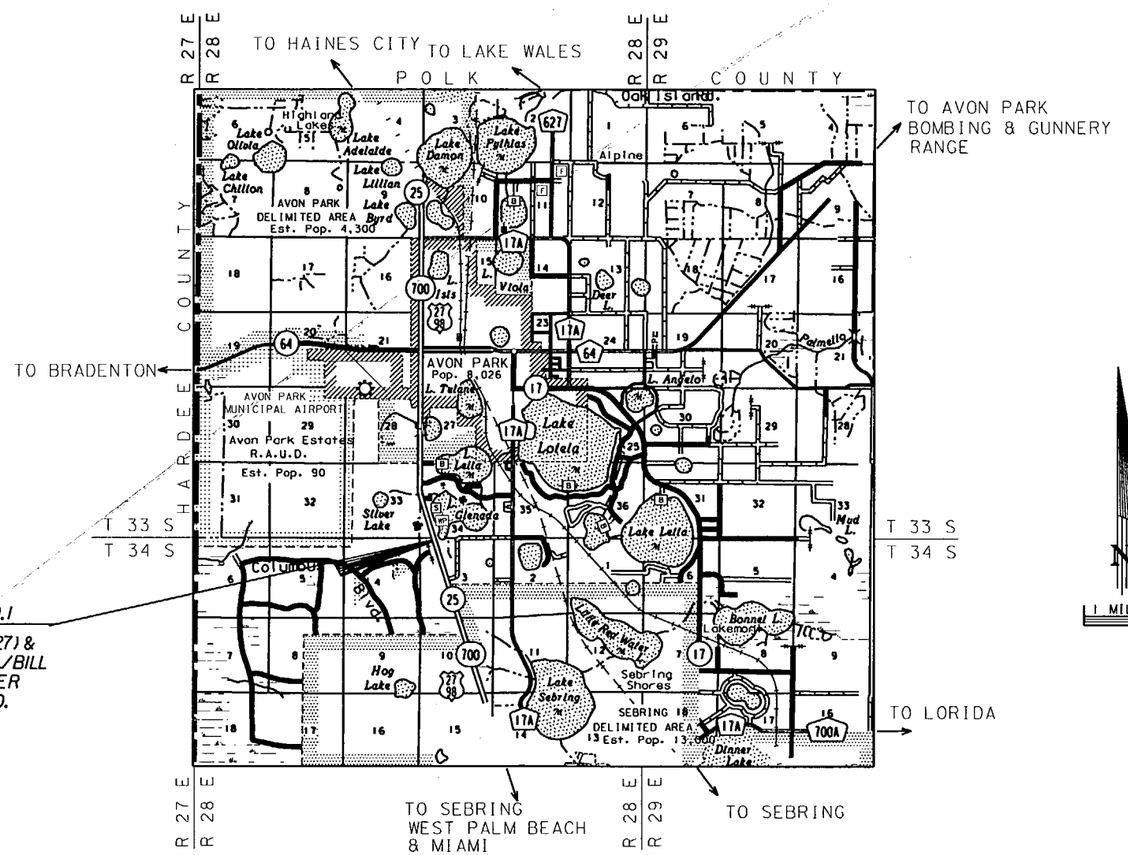
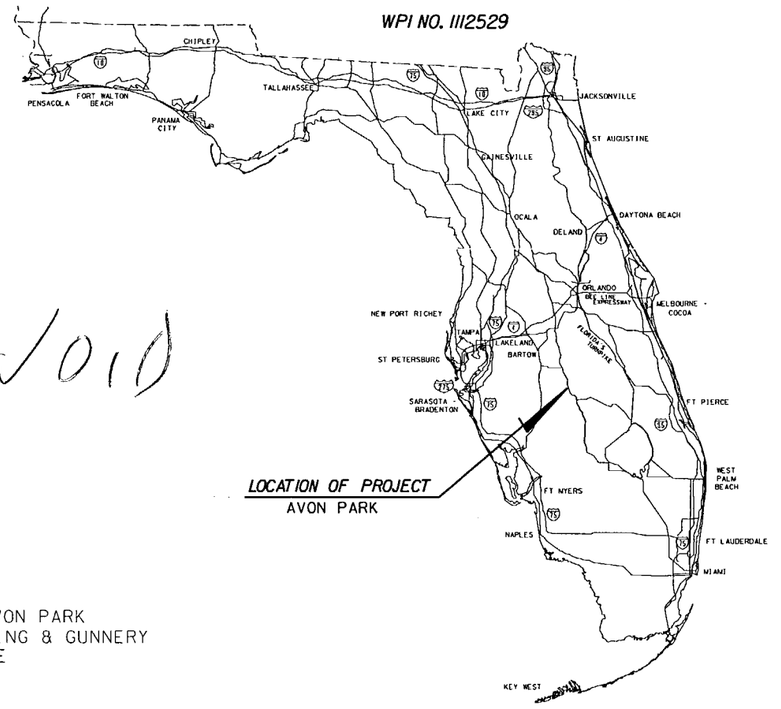
SIGNALIZATION PLANS

VOID

INDEX OF SIGNALIZATION PLANS





GOVERNING STANDARDS AND SPECIFICATIONS
FLORIDA DEPARTMENT OF TRANSPORTATION
ROADWAY AND TRAFFIC DESIGN STANDARDS,
DATED JANUARY 2000, AND
STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE
CONSTRUCTION DATED 2000,
AS AMENDED BY CONTRACT DOCUMENTS

REVISIONS

SIGNALIZATION SHOP DRAWINGS TO BE SUBMITTED TO:
ARTHUR L. SHIPLEY, P.E.
COMPREHENSIVE ENGINEERING SERVICES INC.
201 S. ORANGE AVENUE, SUITE 1300
ORLANDO, FLORIDA 32801

PLANS PREPARED BY:

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Arthur L Shipley
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REVISIONS		
DATE	BY	DESCRIPTION

SIGNALIZATION PLANS ENGINEER OF RECORD: ARTHUR L. SHIPLEY, P.E.
DATE: 11/16/00
P.E. NO.: 49398

FISCAL YEAR	SHEET NO.
01	T-1

FDOT PROJECT MANAGER : ROBERT F. HENRY, J.R.

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
194510-1-52-01	09030-3501	T-2

TABULATION OF QUANTITIES

BID ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS T-4 ORIG.	T-4 FINAL	T-4 A ORIG.	T-4 A FINAL	TOTAL THIS SHEET ORIG.	TOTAL THIS SHEET FINAL	GRAND TOTAL ORIG.	GRAND TOTAL FINAL	REF. SHEET
620-1-1	GROUNDING ELECTRODE (FURNISH & INSTALL)	LF	60	100	—	—	60	100	60	100	
630-1-12	CONDUIT (FURNISH & INSTALL)(UNDERGROUND)	LF	694	679	-0-	238	694	917	694	917	
630-1-14	CONDUIT (FURNISH & INSTALL)(UNDERGROUND-JACKED)	LF	245	260	-0-	38	245	298	245	298	
632-7-1	CABLE (SIGNAL) (FURNISH & INSTALL)	PI	1	1	—	—	1	1	1	1	
634-4-112	SPAN WIRE ASSEMBLY (F&I)(2 WIRE)(DIAGONAL)	PI	1	1	—	—	1	1	1	1	
635-1-11	PULL & JUNCTION BOXES (F&I) (PULL BOX)	EA	13	11	-0-	2	13	13	13	13	
639-1-12	ELECTRICAL POWER SERVICE(OVERHEAD)	AS	1	1	—	—	1	1	1	1	
639-2-1	ELECTRICAL SERVICE WIRE	LF	30	30	—	—	30	30	30	30	
641-17-146	PREST CONC POLE (F&I)(46' TYPE N VIII)	EA	1	1	—	—	1	1	1	1	
641-17-150	PREST CONC POLE (F&I)(50' TYPE N VIII)	EA	1	1	—	—	1	1	1	1	
650-51-311	SIGNAL TRAFFIC(F&I)(3 SECT 1 WAY)(STD)	AS	8	8	—	—	8	8	8	8	
650-51-511	SIGNAL TRAFFIC(F&I)(5 SECT 1 WAY)(STD)	AS	2	2	—	—	2	2	2	2	
659-101	SIGNAL HEAD AUXILIARIES (BACK PLATES 3 SECT)	EA	4	4	—	—	4	4	4	4	
660-1-105	LOOP DETECTOR INDUCTIVE (F&I) (TYPE 5)	EA	6	6	—	—	6	6	6	6	
660-1-106	LOOP DETECTOR INDUCTIVE (F&I) (TYPE 6)	EA	1	1	—	—	1	1	1	1	
660-2-102	LOOP ASSEMBLY (F&I) (TYPE B)	AS	12	12	-0-	6	12	18	12	18	
660-2-106	LOOP ASSEMBLY (F&I) (TYPE F)	AS	6	6	-0-	1	6	7	6	7	
670-5-110	CONTROLLER ASSEMBLY ACT SS F&I NEMA PRE(NONE)	AS	1	1	—	—	1	1	1	1	
680-111	SYSTEM CONTROL EQUIPMENT (ROADSIDE MASTER)	EA	1	1	—	—	1	1	1	1	
680-115	SYSTEM CONTROL EQUIPMENT (AUTODIAL/ANSWER EXT COMM MODEM)	EA	1	1	—	—	1	1	1	1	
685-127	SYSTEM AUXILIARIES (TELEPHONE CONNECTION BOX)	EA	1	1	—	—	1	1	1	1	
690-10	SIGNAL HEAD TRAFFIC ASSEMBLY REMOVAL	EA	9	9	—	—	9	9	9	9	
690-30	POLE REMOVAL	EA	2	2	—	—	2	2	2	2	
690-50	CONTROLLER ASSEMBLY REMOVE	EA	1	1	—	—	1	1	1	1	
690-80	SPAN WIRE ASSEMBLY REMOVE	EA	1	1	—	—	1	1	1	1	
690-90	CONDUIT AND CABLING REMOVE	PI	1	1	—	—	1	1	1	1	
690-100	SIGNAL EQUIPMENT MISCELLANEOUS REMOVE	PI	1	1	—	—	1	1	1	1	
700-48-18	SIGN PANEL (F&I) (15 OR <)	EA	4	4	—	—	4	4	4	4	

Arthur L. Shipley
#49398
11/30/00

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION
11/00	DSP	DELETED PAY ITEM NO. 641-16-142	11/00	DSP	ADDED PAY ITEM NOS. 641-17-146 & 641-17-150						

	NAME	DATE		NAME	DATE
DESIGNED BY	DSP	11-00	DRAWN BY	DSP	11-00
CHECKED BY	CAS	11-00	CHECKED BY	CAS	11-00

SUPERVISED BY : ARTHUR L. SHIPLEY, P.E.

FLORIDA DEPARTMENT OF TRANSPORTATION

APPROVED BY :

DATE :

CES Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300 Orlando, FL 32801-3417
Engineering Business Number : 7052

TABULATION OF QUANTITIES

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
194510-1-52-01	09030-3501	T-2

TABULATION OF QUANTITIES

BID ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS T-4 ORIG.	T-4 FINAL	TOTAL THIS SHEET ORIG.	TOTAL THIS SHEET FINAL	GRAND TOTAL ORIG.	GRAND TOTAL FINAL	REF. SHEET
620-1-1	GROUNDING ELECTRODE (FURNISH & INSTALL)	LF	60		60		60		
630-1-12	CONDUIT (FURNISH & INSTALL)(UNDERGROUND)	LF	694		694		694		
630-1-14	CONDUIT (FURNISH & INSTALL)(UNDERGROUND-JACKED)	LF	245		245		245		
632-7-1	CABLE (SIGNAL) (FURNISH & INSTALL)	PI	1		1		1		
634-4-112	SPAN WIRE ASSEMBLY (F&I)(2 WIRE)(DIAGONAL)	PI	1		1		1		
635-1-11	PULL & JUNCTION BOXES (F&I) (PULL BOX)	EA	13		13		13		
639-1-12	ELECTRICAL POWER SERVICE(OVERHEAD)	AS	1		1		1		
639-2-1	ELECTRICAL SERVICE WIRE	LF	30		30		30		
641-16-142	PREST CONC POLE (F&I)(42' TYPE N VII)	EA	2		2		2		
650-51-311	SIGNAL TRAFFIC(F&I)(3 SECT 1 WAY)(STD)	AS	8		8		8		
650-51-511	SIGNAL TRAFFIC(F&I)(5 SECT 1 WAY)(STD)	AS	2		2		2		
659-101	SIGNAL HEAD AUXILIARIES (BACK PLATES 3 SECT)	EA	4		4		4		
660-1-105	LOOP DETECTOR INDUCTIVE (F&I) (TYPE 5)	EA	6		6		6		
660-1-106	LOOP DETECTOR INDUCTIVE (F&I) (TYPE 6)	EA	1		1		1		
660-2-102	LOOP ASSEMBLY (F&I) (TYPE B)	AS	12		12		12		
660-2-106	LOOP ASSEMBLY (F&I) (TYPE F)	AS	6		6		6		
670-5-110	CONTROLLER ASSEMBLY ACT SS F&I NEMA PRE(NONE)	AS	1		1		1		
680-111	SYSTEM CONTROL EQUIPMENT (ROADSIDE MASTER)	EA	1		1		1		
680-115	SYSTEM CONTROL EQUIPMENT (AUTODIAL/ANSWER EXT COMM MODEM)	EA	1		1		1		
685-127	SYSTEM AUXILIARIES (TELEPHONE CONNECTION BOX)	EA	1		1		1		
690-10	SIGNAL HEAD TRAFFIC ASSEMBLY REMOVAL	EA	9		9		9		
690-30	POLE REMOVAL	EA	2		2		2		
690-50	CONTROLLER ASSEMBLY REMOVE	EA	1		1		1		
690-80	SPAN WIRE ASSEMBLY REMOVE	EA	1		1		1		
690-90	CONDUIT AND CABLING REMOVE	PI	1		1		1		
690-100	SIGNAL EQUIPMENT MISCELLANEOUS REMOVE	PI	1		1		1		
700-48-18	SIGN PANEL (F&I) (15 OR <)	EA	4		4		4		

VOID

Arthur L. Shipley
#49818
11/16/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	DSP	11-00	DRAWN BY	DSP	11-00
CHECKED BY	CAS	11-00	CHECKED BY	CAS	11-00

SUPERVISED BY : ARTHUR L. SHIPLEY, P.E.

FLORIDA DEPARTMENT OF TRANSPORTATION

APPROVED BY :

DATE :

CES Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300 Orlando, FL 32801-3417
Engineering Business Number: 7662

TABULATION OF QUANTITIES

FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
194510-1-52-01	09030-3501	T-3

GENERAL NOTES

1. BASE OF CONTROLLER TO BE SAME ELEVATION AS CENTER OF ROADWAY OR GREATER.
2. INSURANCE AS REFERENCED IN SECTION 7-13.5 IN THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION (EDITION AS SHOWN ON KEY SHEET) SHALL BE PROVIDED BY THE CONTRACTOR WHEN INSTALLING OR WHEN WORKING ON OR IN THE VICINITY OF JOINT-USE POLES OR WHEN WORKING IN THE VICINITY OF POWER LINES.
3. THE CONTRACTOR SHALL NOTIFY THE HIGHLANDS COUNTY TRAFFIC ENGINEER AT LEAST 24 HOURS IN ADVANCE OF LOOP CUTTING. THE TRAFFIC ENGINEER MAY CHALK THE LOOPS AND OBSERVE THEIR INSTALLATION IF HE SO DESIRES.
4. TYPE "F" LOOPS SHALL BE 6'x 50' AND PLACED A MINIMUM OF 2' IN ADVANCE OF THE STOP BAR.
5. LOOP HOME RUNS SHALL BE PLACED IN CONDUIT.
6. THE USE OF PREFORMED LOOPS IS NOT PERMITTED.
7. WHEN CONDUIT IS INSTALLED UNDER ROADWAY PAVEMENT, ONE ADDITIONAL RUN SHALL BE INSTALLED FOR FUTURE USE.
8. IT SHOULD BE NOTED NO TEST BORINGS WERE MADE WHERE CONDUIT RUNS ARE TO BE INSTALLED BY JACKING OR TRENCHING. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO EXAMINE THE JOB SITE CONDITIONS BEFORE SUBMITTING BID PROPOSALS IN ACCORDANCE WITH SECTION 2-4 OF THE STANDARD SPECIFICATIONS.
9. THE CONTROLLER SHALL REVERT TO FULL ACTUATED OPERATION UPON DISCONNECTING THE COORDINATING UNIT WHEN LOOPS ARE AVAILABLE ON THE COORDINATED APPROACHES.
10. FOR PAVEMENT MARKINGS SEE SIGNING AND PAVEMENT MARKING PLANS.
11. ALL CONDUIT SHALL BE 2" MINIMUM UNLESS OTHERWISE SPECIFIED IN PLANS, EXCEPT ELECTRICAL POWER SERVICE DUCT. INTERCONNECT CABLE CONDUIT SHALL BE 3" MINIMUM.
12. AT LEAST 48 HOURS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, CONTRACTOR SHALL CONTACT:

    CARMON C. THOMPSON, TRAF. OPS. LIAISON — PH: 863-519-2513
    FLORIDA DEPARTMENT OF TRANSPORTATION — (SUNCOM 557-2513)
    P.O. BOX 1249 (801 N. BROADWAY)
    BARTOW, FL 33831
13. A MANUAL PUSHBUTTON CORD SHALL BE FURNISHED IN ALL CONTROLLER CABINETS.
14. EXISTING EQUIPMENT OWNERS: THE FLORIDA DEPARTMENT OF TRANSPORTATION.
    SIGNAL TO BE MAINTAINED BY: HIGHLANDS COUNTY TRAFFIC DEPARTMENT.
15. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THE LOCATION OF EXISTING UTILITIES, BOTH HORIZONTAL AND VERTICAL PRIOR TO BORING OR JACKING OPERATIONS.
16. AS DIRECTED BY THE PROJECT ENGINEER, THE CONTRACTOR SHALL ADJUST CONDUIT & PULL BOXES HORIZONTALLY AND/OR VERTICALLY IN ORDER TO AVOID ANY POSSIBLE CONFLICTS WITH UNDERGROUND UTILITIES.
17. THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL UTILITIES PRIOR TO EXCAVATION.
18. CONCRETE AREAS DISTURBED BY THE INSTALLATION OF PULL BOXES, SIGNAL POLES AND PEDESTRIAN POLES SHALL BE REPLACED. REPLACEMENT SHALL BE TO THE NEAREST EXPANSION JOINT.
19. EXISTING SIGNALIZATION SHALL REMAIN IN PLACE TO THE EXTENT POSSIBLE AND SHALL BE USED FOR MAINTENANCE OF TRAFFIC AS REQUIRED. THE MAINTENANCE OF EXISTING SIGNALS, UNTIL REMOVED, SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR. SIGNALIZATION SHALL BE MAINTAINED THROUGHOUT THE LIFE OF THE CONTRACT.
20. THE CONTROLLER CABINET SHALL BE ORIENTED SUCH THAT THE CABINET DOOR SWINGS OPEN AWAY FROM THE INTERSECTION.
21. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT BEING REMOVED SHALL BE RETURNED TO THE HIGHLANDS COUNTY TRAFFIC MAINTENANCE OFFICE.
22. THE INSTALLATION OF CONDUIT AND PULL BOXES FOR ELECTRICAL POWER SERVICE IS TO BE COORDINATED WITH UTILITY COMPANIES AS DIRECTED BY THE ENGINEER.
23. THE LOCATIONS SHOWN FOR THE POWER SERVICE POINTS FOR EACH TRAFFIC SIGNAL ARE APPROXIMATE LOCATIONS. THE CONTRACTOR SHALL CONTACT THE LOCAL ELECTRIC COMPANY TO COORDINATE THE EXACT LOCATION OF THE POWER SERVICE.
24. SECTION 611-4, FIELD TESTS:

    SCHEDULING OF THE CONDITIONAL ACCEPTANCE INSPECTION SHALL BE COORDINATED WITH CARMON THOMPSON, TRAFFIC OPERATIONS LIAISON (PH: 863-519-2513) WITH A MINIMUM OF 48 HOURS NOTICE.

    RESULTS OF FIELD TESTS, I.E., SECTION 611-4.1, 4.2, 4.3, AND 4.4, SHALL BE MADE AVAILABLE TO THE PROJECT ENGINEER IN WRITTEN FORM. A QUALIFIED REPRESENTATIVE SHALL BE PRESENT AT THE CONDITIONAL ACCEPTANCE INSPECTION OF THE CONTROLLER ASSEMBLY. THE QUALIFICATIONS OF THE REPRESENTATIVE SHALL INCLUDE:

    (A) COMPLETE FAMILIARITY WITH ALL SYSTEM ELEMENTS INCLUDING CONTROLLERS, COORDINATING UNITS, SYSTEM CLOCKS AND SYSTEM COMMUNICATIONS ELEMENTS. THE REPRESENTATIVE SHALL BE QUALIFIED TO INPUT AND RECALL ALL CONTROLLER AND SYSTEM TIMING FUNCTIONS.

UTILITY OWNERS

UNITED TELEPHONE COMPANY
P.O.BOX 1028
AVON PARK, FL 33825
ATTN. MR. TONY BRANNON
PHONE (863) 452-3164

CITY OF AVON PARK
110 E. MAIN STREET
AVON PARK, FL 33825
ATTN. MR. L.K. BUTLER
PHONE (863) 452-4427

COMCAST COMMUNICATIONS
3010 HERRING AVENUE
SEBRING, FL. 33870
ATTN. MR. WALT McHARGUE
PHONE (863) 385-4401

FLORIDA POWER CORPORATION
151 E. CENTRAL AVENUE
LAKE WALES, FL 33853-7119
ATTN. ROBERT WILLIAMS
OR TROY COCKRANE
PHONE (863) 471-5858

PEOPLE GAS SYSTEM
P.O. BOX 1704
AVON PARK, FL 33825
ATTN. MR. REYNOLDS
PHONE (863) 452-2251

PAY ITEM NOTES

1. 630-1-12:

   IN LIEU OF THE INSTALLATION OF NEW CONDUIT, EXISTING CONDUIT (IF NOT DAMAGED) MAY BE RE-USED, AS DIRECTED BY THE PROJECT ENGINEER.

   PAYMENT SHALL INCLUDE THE COST OF TRENCHING AND ALL CONDUIT IN TRENCH.

2. 630-1-12:

   ALL CONDUIT UNDER PROPOSED ROADWAY AND/OR SIDEWALK SHALL BE INSTALLED PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE OR CONCRETE.

3. 630-1-14:

   UNDERGROUND JACKED CONDUIT IS TO INCLUDE MULTIPLE CONDUITS (PVC OR EQUAL) INSTALLED IN ONE JACKED SLEEVE UNDER ROADWAY (OR RAILROAD TRACK). SEE PLAN SHEET(S) FOR NUMBER OF CONDUITS.

4. 632-7-1:

   THIS ITEM SHALL INCLUDE ALL LABOR AND WIRE NECESSARY FOR COMPLETE REWIRING OF INTERSECTION.

   SIGNAL CABLE SHALL BE SPLICED TO A SEPARATE CABLE (FOR EACH SIGNAL HEAD) IN THE BASE OF THE SIGNAL POLE. EACH SEPARATE CABLE SHALL HAVE A MINIMUM OF 0.5 FT. DIAMETER LOOP FOR FUTURE SPLICING. THE CABLES SHALL BE CONNECTED USING B-CAP (EPOXY FILLED) TWIST WIRE NUTS. A PERMANENT MARKING SHALL BE PLACED ON THE WIRE DESIGNATING THE PHASE USED. SPARE CONDUCTORS SHALL BE CONNECTED TOGETHER USING B-CAP (EPOXY FILLED) TWIST WIRE NUTS. NUMBER OF SPARE CONDUCTORS SHALL BE IN ACCORDANCE WITH SECTION 632-3.1 OF THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, BOOKLET EDITION AS NOTED ON KEY SHEET.

5. 635-1-11:

   CONTRACTOR IS RESPONSIBLE FOR APPROPRIATELY SIZING EACH PULL BOX SO THE COMMUNICATION AND/OR INTERCONNECT CABLE DOES NOT EXCEED MANUFACTURERS RECOMMENDED BENDING RADIUS.

   PULL BOXES AND LIDS SHALL BE QUAZITE OR THE APPROVED EQUIVALENT.

6. 639-1-12:

   THIS ITEM SHALL INCLUDE THE COST OF ALL SPECIAL IMPACT CONNECTION FEES CHARGED BY LOCAL POWER COMPANIES FOR ELECTRICAL SERVICE CONNECTION.

   THIS ITEM SHALL INCLUDE A LEVER-TYPE BYPASS METER SOCKET.

7. 639-2-1:

   PAYMENT SHALL BE BASED ON THE LINEAR FOOT OF A SINGLE CONDUCTOR.

   IN ADDITION TO THREE SERVICE WIRES, THIS ITEM SHALL INCLUDE A BONDING WIRE FROM ELECTRICAL SERVICE POINT TO CONTROLLER.

8. 641-17-146 AND 641-17-150:

   THIS ITEM SHALL INCLUDE FURNISHING, INSTALLING, AND REMOVING ALL TEMPORARY EQUIPMENT NECESSARY FOR STABILIZING EXISTING SIGNAL POLES DURING CONSTRUCTION.

9. 650-51-311, AND 650-51-511:

   THE ELECTRICAL CONNECTORS IN THE DISCONNECT HOUSING SHALL BE CAPABLE OF CONNECTING WITH CINCH JONES CONNECTORS WITHOUT USE OF SPECIAL ADAPTORS.

   ALL SIGNAL HEADS SHALL HAVE GLASS LENSES.

   CONTRACTOR SHALL PROVIDE B-CAP (EPOXY FILLED) TWIST WIRE NUTS FOR ALL CONNECTIONS IN THE DISCONNECT. CONTRACTOR SHALL ALSO PROVIDE RED, YELLOW, GREEN, AND WHITE THHN #14 COPPER WIRE FROM DISCONNECT TO SIGNAL HEAD. A PERMANENT MARKING SHALL BE PLACED ON THE WIRE DESIGNATING THE PHASE USED.

   SIGNAL HEAD RED SECTION SHALL BE APPROVED LED TYPE.

10. 660-2-102 AND 660-2-106:

    EUCLID 495-H.P. OR 3M "DETECTOR LOOP SEALANT" SHALL BE USED FOR SEALANT IN SAW CUTS.

    CONTRACTOR SHALL SPLICE LOOP WIRE TO LEAD-IN WIRE USING B-CAP (SILICONE FILLED) TWIST WIRE NUTS.

    EACH LOOP SHALL BE MARKED PER PHASE AND PER DIRECTION AT EACH SPLICE POINT AND AT THE CABINET TERMINATION POINT.

    CONTRACTOR SHALL INSTALL THE TWISTED PAIR AND LOOP LEAD-IN AS SHOWN IN ALTERNATIVE 1 OF INDEX NO. 17781 OF THE ROADWAY AND TRAFFIC DESIGN STANDARDS, BOOKLET EDITION AS NOTED ON KEY SHEET.

    THIS ITEM SHALL INCLUDE LOOP LEAD-IN WIRE FROM LOOP PULL BOX TO CONTROLLER UNLESS NOTED OTHERWISE ON PLAN SHEET.

11. 670-5-110:

    THIS ITEM SHALL INCLUDE ADDITIONAL COST OF CONCRETE, LABOR, AND OTHER MATERIALS FOR CONTROLLER BASE, PAD, AND STEPS AS REQUIRED.

    THIS ITEM SHALL INCLUDE THE IMPLEMENTATION OF TIMINGS INTO ALL COMPONENTS. THE COORDINATION TIMINGS WILL BE SUPPLIED TO THE PROJECT ENGINEER UPON HIS REQUEST. REQUESTS SHOULD BE MADE TO DISTRICT 1 TRAFFIC OPERATIONS ENGINEER, TELEPHONE (863) 519-2490.

    THE CONTROLLER AND CABINET SHALL BE COMPATIBLE WITH THE EXISTING HIGHLANDS COUNTY CLOSED LOOP COMPUTER SYSTEM. ALL LABOR AND MATERIALS (INCLUDING THE INTERFACE PANEL AND LIGHTNING ARRESTORS) NECESSARY FOR A COMPLETE AND ACCEPTABLE INSTALLATION SHALL BE INCLUDED IN THE PRICE FOR A CONTROLLER ASSEMBLY.

    CONTROLLER CABINET SHALL INCLUDE 1 ADDITIONAL SPARE CONDUIT (FOR A TOTAL OF 3 SPARES) IN THE CABINET BASE.

12. 700-48-18 :

    THIS ITEM SHALL INCLUDE THE DROP PIPES, BRACKETS, CLAMPS AND ALL MISCELLANEOUS HARDWARE NECESSARY TO INSTALL THE SIGNS (TYPE "B" MOUNTING) ON THE SIGNAL SPAN WIRE, IN ACCORDANCE WITH INDEX NO. 17356. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING SIGN SUPPORT COMPONENTS TO MEET THE FOLLOWING CRITERIA:

SIGN AREA	17.5 S.F.
MINIMUM DEAD LOAD WEIGHT	80 LBS.
MINIMUM WIND LOAD	1000 LBS.

Arthur L. Shipley
#49918
11/16/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	DSP	11-00	DRAWN BY	DSP	11-00
CHECKED BY	CAS	11-00	CHECKED BY	CAS	11-00

SUPERVISED BY : ARTHUR L. SHIPLEY, P.E.

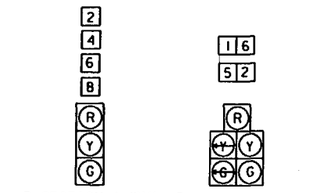
FLORIDA DEPARTMENT OF TRANSPORTATION
APPROVED BY :
DATE :

CES Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300 Orlando, FL 32801-3417
Engineering Business Number : 7882

GENERAL NOTES

FINANCIAL PROJ. I.D.	STATE PROJ. NO.	SHEET NO.
194510-1-52-01	09030-3501	T-4

DETAIL OF SIGNAL FACES



SIGN A

700-48-18 2 EA ✓ Dr.

5" / 8"C / 5" — COLLEGE RD — 1'6" — 6'0"

C	O	L	L	E	G	E		R	D	
5.7		38.1					12.0	10.4		5.8

BORDER RADII 2-1/4"
BACKGROUND COLOR GREEN
LEGEND & BORDER COLOR WHITE

SIGN B

700-48-18 2 EA ✓

5" / 8"C / 5" — SACHSENMAIER — 1'6" — 6'0"

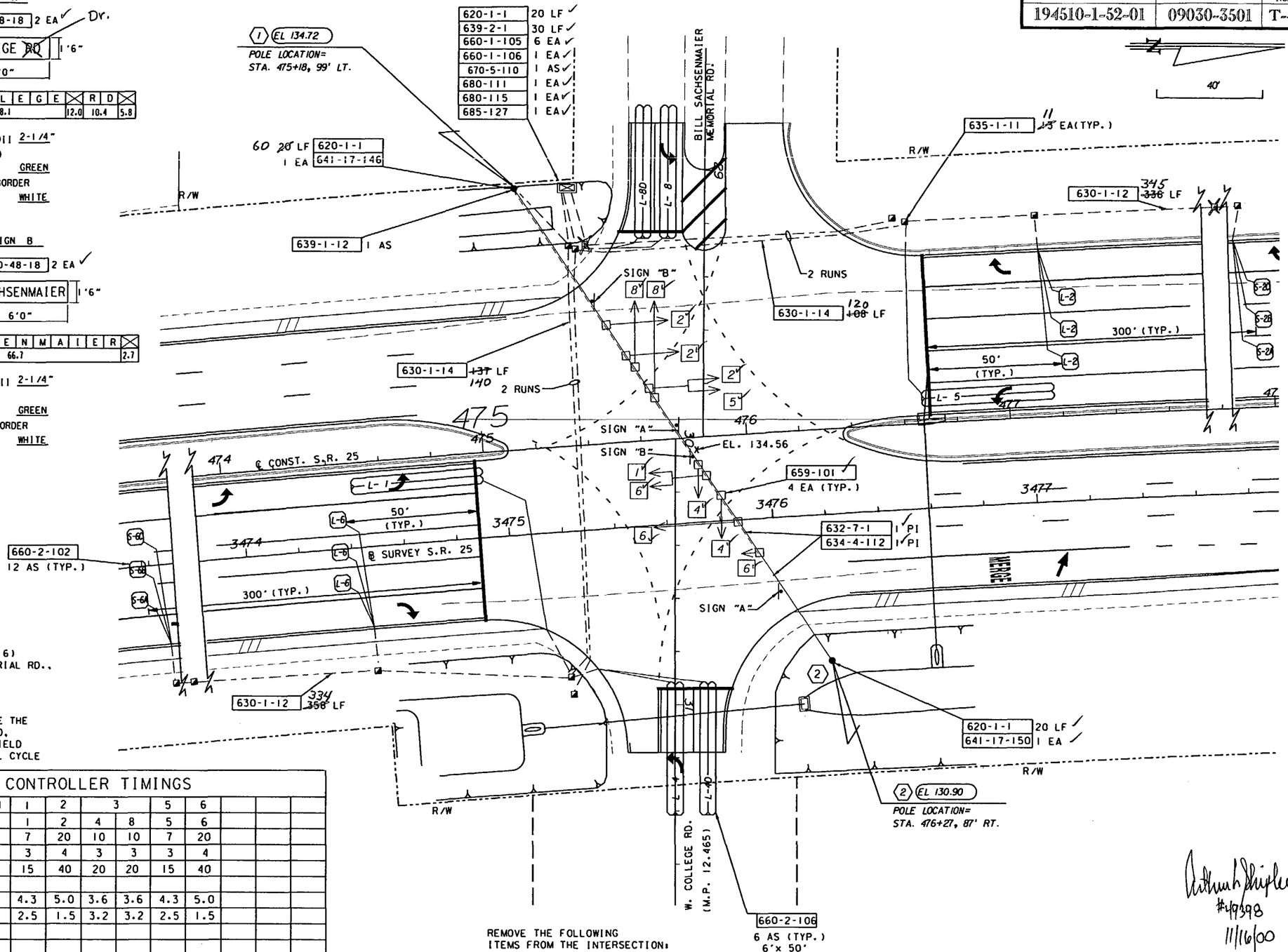
S	A	C	H	S	E	N	M	A	I	E	R
2.6			66.7								2.7

BORDER RADII 2-1/4"
BACKGROUND COLOR GREEN
LEGEND & BORDER COLOR WHITE

DETECTORS FOR LOOPS

LOOP	NO. OF LOOPS	NO. OF NEW DETS.	CHANNEL NO.	DELAY TIME (SEC)
L-1	1		1	
L-5	1	1	2	
L-2	3		1	
L-6	3	1	2	
L-4	1		1	
L-8	1	1	2	
L-4D	1		1	5
L-8D	1	1	2	5
S-2A	1		1	
S-2B	1	1	2	
S-2C	1		1	
S-6A	1	1	2	
S-6B	1		1	
S-6C	1	1	2	

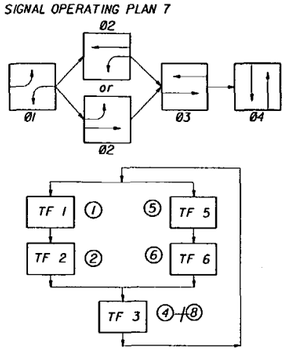
DELAY TIME IS INTIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.



CONTROLLER OPERATION:

1. MAJOR STREET IS S.R. 25 (U.S. 27), PHASE 3 (MOVEMENTS 2 & 6) AND MINOR STREET IS W. COLLEGE RD./BILL SACHSENMAIER MEMORIAL RD., PHASE 4 (MOVEMENTS 4 & 8).
2. SIGNAL OPERATING PLAN No. 7 WITH THE FOLLOWING:
   (A) COORDINATION ON PHASE 3 (MOVEMENTS 2 & 6). (FUTURE)
   (B) THE YIELD POINT SHALL BE THE POINT IN THE CYCLE WHERE THE COORDINATED PHASE 3 (MOVEMENTS 2 & 6) IS TERMINATED, SUBJECT TO THE PRESENCE OF CONFLICTING CALL. THE YIELD POINT SHALL BE THE ZERO PERCENT OFFSET OF THE LOCAL CYCLE LENGTH.

SIGNAL OPERATING PLAN 7



CONTROLLER TIMINGS

	TIMING FUNCTION	1	2	3		5	6			
	MOVEMENT NO	1	2	4	8	5	6			
TIMING FUNCTION	MIN GRN (INT)	7	20	10	10	7	20			
	EXT (PASS)	3	4	3	3	3	4			
	MAX GRN I	15	40	20	20	15	40			
	MAX GRN II									
	YELLOW CLR	4.3	5.0	3.6	3.6	4.3	5.0			
	ALL RED CLR	2.5	1.5	3.2	3.2	2.5	1.5			
	PED WALK									
	PED CLR									
	RECALL	-	MIN	-	-	-	MIN			
	FLASH OPERATION		Y	R	R		Y			
	DETECTOR FUNCTION	NON LOCK	LOCK	NON LOCK	NON LOCK	NON LOCK	LOCK			

TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY THE PROJECT ENGINEER. INSTALL SEQUENTIAL TIMING OF INITIAL AND EXTENSION INTERVALS.

REMOVE THE FOLLOWING ITEMS FROM THE INTERSECTION:

690-10	9 EA ✓
690-30	2 EA ✓
690-50	1 EA ✓
690-80	1 EA ✓
690-90	1 PI ✓
690-100	1 PI ✓

Arthur L. Shipley #49398 11/16/00

LOCATION I
S.R. 25 (U.S. 27)
@ COLLEGE RD/
BILL SACHSENMAIER MEMORIAL RD.

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	DSP	11-00	DRAWN BY	DSP	11-00
CHECKED BY	CAS	11-00	CHECKED BY	CAS	11-00

SUPERVISED BY : ARTHUR L. SHIPLEY, P.E.

FLORIDA DEPARTMENT OF TRANSPORTATION
APPROVED BY :
DATE :

CES Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300 Orlando, FL 32801-3417
Engineering Business Number : 7882

SIGNALIZATION PLAN

FINANCIAL PROJ. I.D.	STATE PROJ. NO.	SHEET NO.
194510-1-52-01	09030-3501	T-5

LEAD IN CABLES

TWISTED PAIR LOOP WIRE

CONDUIT

CONTROLLER

SIGNAL HEAD AND DIRECTION ARROW

SIGNAL HEAD NUMBER

SIGNAL PULL BOX

SIGNAL POLE

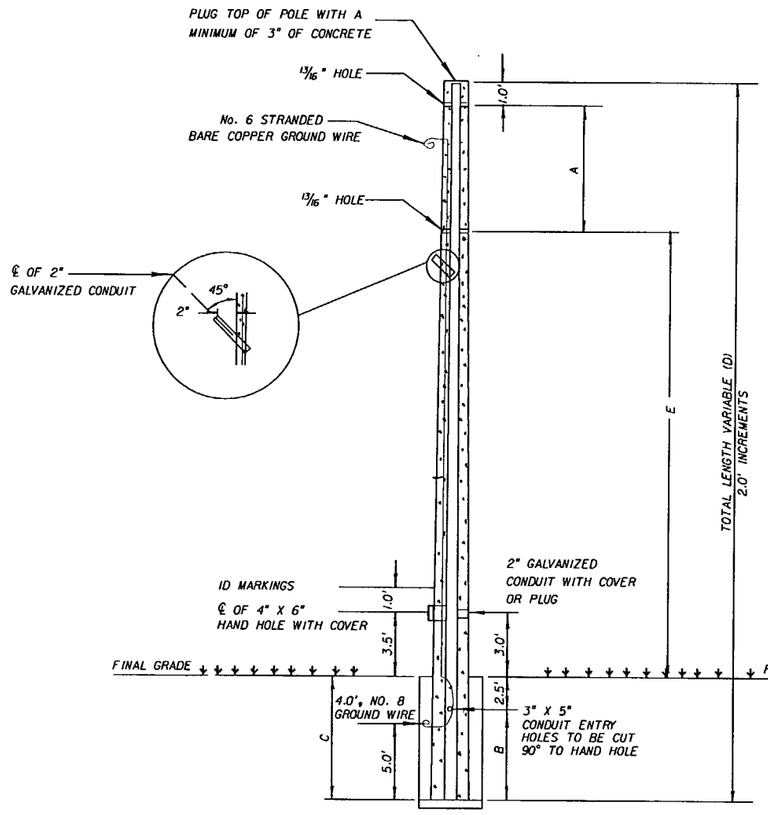
PEDESTRIAN POLE

PEDESTRIAN HEAD

POLE SCHEDULE

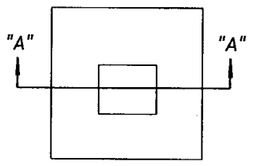
STATION	OFFSET	POLE NO.	TYPE	FOOTER DEPTH	A	D	ITEM NO.	QUANTITY	*CATENARY WIRE	*MESSENGER WIRE
475+18	99' LT	1	N-VIII	11.0'	11.75'	46'	641-17-146	1	1/4"	3/8"
476+27	87' RT	2	N-VIII	11.0'	11.75'	50'	641-17-150	1		

* CATENARY AND MESSENGER WIRES ARE TO BE EXTRA HIGH STRENGTH GRADES.

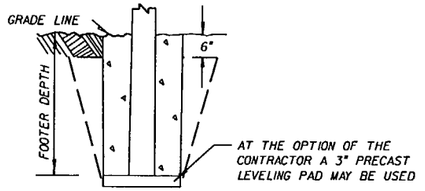


POLE SECTION

TYPES N-III through N-VIII



FOUNDATION PLAN



SECTION "A-A"

Arthur L. Shipley
#49398
11/16/00

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY	DSP	11-00	DRAWN BY	DSP	11-00
CHECKED BY	CAS	11-00	CHECKED BY	CAS	11-00

SUPERVISED BY : ARTHUR L. SHIPLEY, P.E.

FLORIDA DEPARTMENT OF TRANSPORTATION

APPROVED BY :

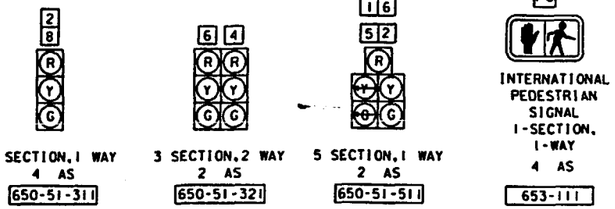
DATE :

CES Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300 Orlando, FL 32801-3417
Engineering Business Number : 7852

CONCRETE STRAIN POLE SCHEDULE
CONVENTIONAL SIGNAL SYMBOLS

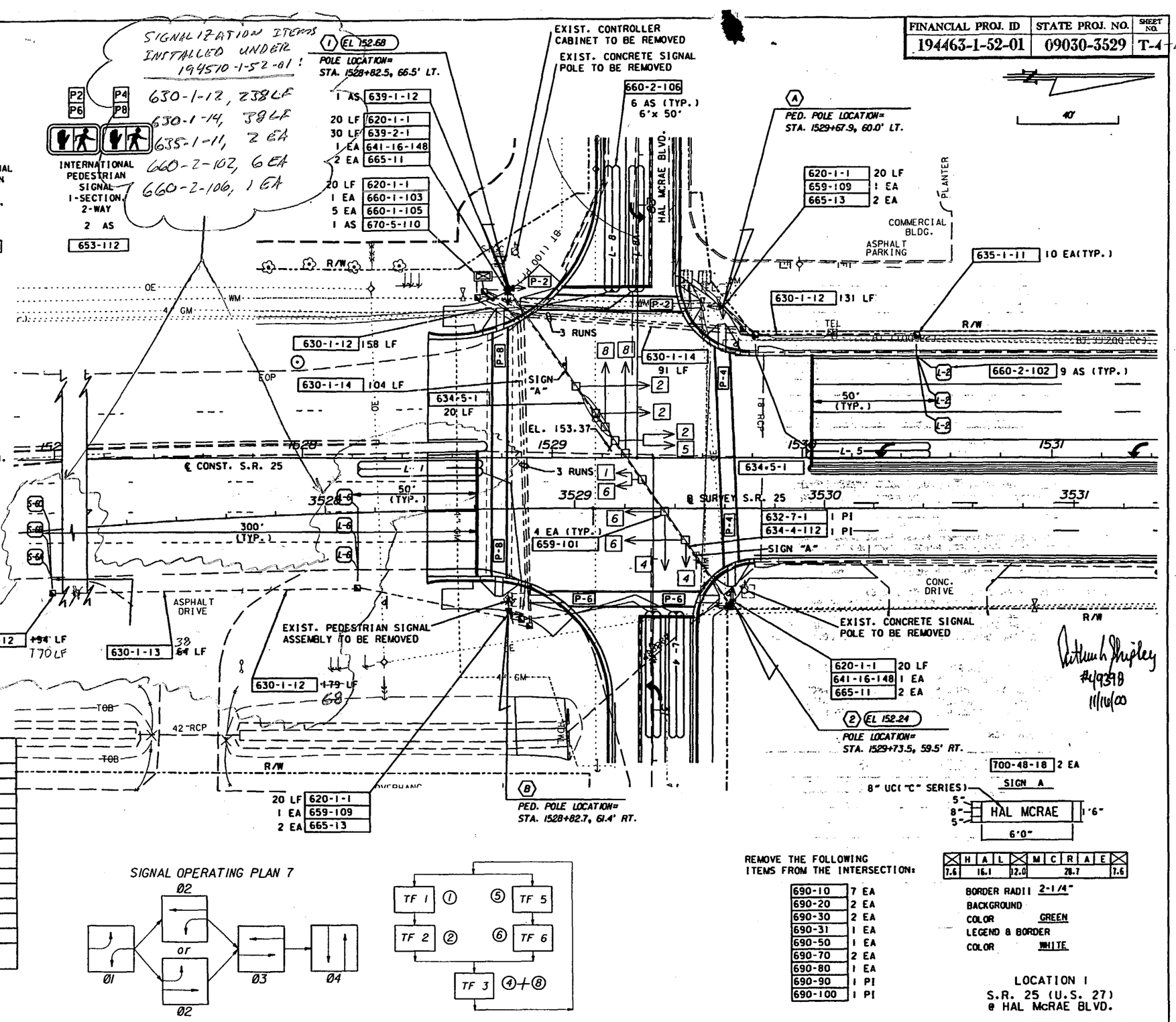
FINANCIAL PROJ. ID	STATE PROJ. NO.	SHEET NO.
194463-1-52-01	09030-3529	T-4A

DETAIL OF SIGNAL FACES



SIGNALIZATION ITEMS INSTALLED UNDER 194510-1-52-01 !

630-1-12, 238 LF
630-1-14, 398 LF
635-1-11, 2 EA
660-2-102, 6 EA
660-2-106, 1 EA



Arthur L Shipley #49398 11/16/00

CONTROLLER OPERATION:

1. MAJOR STREET IS S.R. 25 (U.S. 27) PHASE 3 (MOVEMENTS 286) AND MINOR STREET IS HAL MCRAE BLVD. PHASE 4 (MOVEMENTS 488).
2. USE SIGNAL OPERATING PLAN No. 7 WITH THE FOLLOWING:
   - (A) COORDINATION ON PHASE 3 (MOVEMENTS 2 8 6).
   - (B) THE YIELD POINT SHALL BE THE POINT IN THE CYCLE WHERE THE COORDINATED PHASE 3 (MOVEMENTS 2 8 6) IS TERMINATED. SUBJECT TO THE PRESENCE OF A CONFLICTING CALL. THE YIELD POINT SHALL BE THE ZERO PERCENT OFFSET OF THE LOCAL CYCLE LENGTH.
   - (C) CONCURRENT/ACTUATED PEDESTRIANS FOR MOVEMENTS P2, P4, P6 AND P8. THE FORCE-OFF FUNCTION FOR PHASE 3 SHALL NOT BE EFFECTIVE DURING THE TIMING OF PEDESTRIAN CLEARANCE INTERVAL FOR P4 & P8. SYNCHRONIZATION SHALL BE MAINTAINED. THE CONTROLLER SHALL REMAIN IN THE COORDINATED MODE AND SHALL NOT REVERT TO ISOLATED OPERATION AS A RESULT OF PEDESTRIAN ACTUATION.

DETECTORS FOR LOOPS

LOOPS	NO. OF LOOPS	NO. OF 2 CHANNEL DETS.	NO. OF 1 CHANNEL DETS.	DELAY TIME (SECONDS)
L-1/L-6	4	1		-
L-2/L-5	4	1		-
L-4/L-4A	2	1		-
L-8/L-8A	2	1		-
S-6A	1		1	-
S-6B & C	2	1		-

CONTROLLER TIMINGS

	TIMING FUNCTION	1	2	3	4	5	6	7	8	
	MOVEMENT	1	2	488		5	6			
TIMING FUNCTION	MIN GRN (INT)	7	20	10		7	20			
	EXT (PASS)	3	4	3		3	4			
	MAX GRN 1	20	40	30		20	40			
	MAX GRN 11									
	YELLOW CLR	3.6	4.3	3.5		3.6	4.3			
	ALL RED CLR	2.7	2.0	3.8		2.7	2.0			
	PED WALK		7	7			7			
	PED CLR		14	27			14			
	RECALL	-	MIN.	-	-	-	MIN.			
	FLASH OPERATION		Y	R			Y			
	DETECTOR FUNCTION	NON LOCK	LOCK	NON LOCK	NON LOCK	NON LOCK	LOCK			

TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY THE PROJECT ENGINEER. INSTALL CONCURRENT TIMING OF INITIAL AND EXTENSION INTERVALS.

SIGNAL OPERATING PLAN 7

REMOVE THE FOLLOWING ITEMS FROM THE INTERSECTION:

690-10	7 EA
690-20	2 EA
690-30	2 EA
690-31	1 EA
690-50	1 EA
690-70	2 EA
690-80	1 EA
690-90	1 PI
690-100	1 PI

LOCATION 1
S.R. 25 (U.S. 27)
@ HAL McRAE BLVD.

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

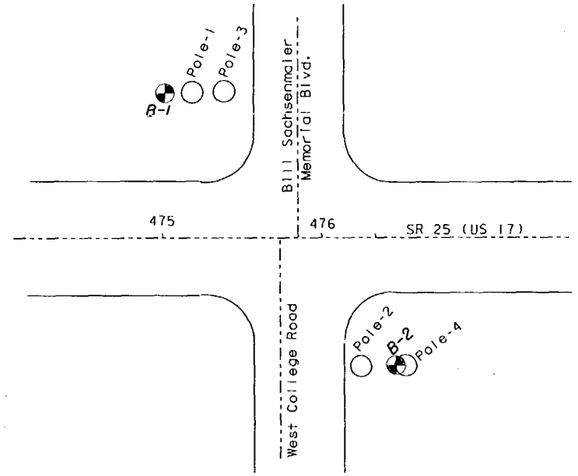
	NAME	DATE		NAME	DATE
DESIGNED BY	DSP	10-00	DRAWN BY	DSP	10-00
CHECKED BY	CAS	10-00	CHECKED BY	CAS	10-00
SUPERVISED BY :	ARTHUR L. SHIPLEY, P.E.				

FLORIDA DEPARTMENT OF TRANSPORTATION
APPROVED BY :
DATE :

CES Comprehensive Engineering Services, Inc.
201 S Orange Ave, Suite 1300 Orlando, FL 32801-3417
Certificate of Authorization Number : 7652

SIGNALIZATION PLAN

FINANCIAL PROJECT NO.	FED. ROAD DIV. NO.	STATE	PROJECT NO.	FISCAL YEAR	SHEET NO.
194510-1-52-01	3	FLA.	09030-3501		T-6

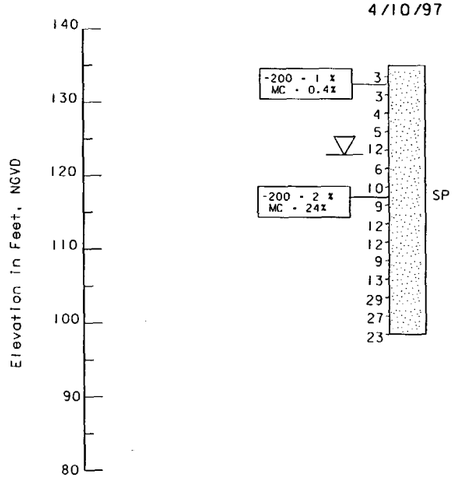


RECOMMENDED DESIGN PARAMETERS FOR POLES 1, 2, 3 and 4

Depth (Feet)	Total Unit Wt. (pcf)	Submerged Unit Wt. (pcf)	Angle of Internal Friction (degrees)	Cohesion (psf)
0.0'-29.0'	105	42.6	29	-----
29.0'-36.5'	115	52.6	32	-----

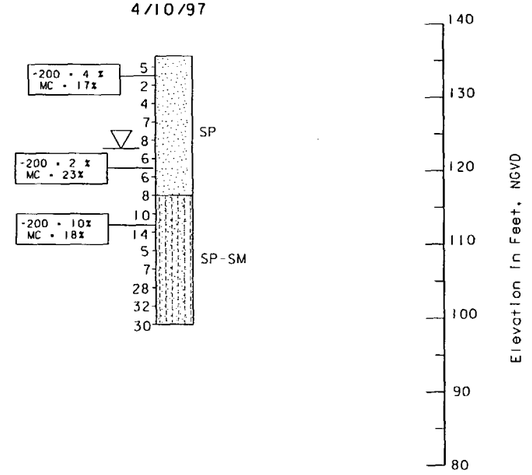
BORING NO. B-1
Sta. 475+12
99.0' Lt
Elev. 134.9'

4/10/97



BORING NO. B-2
Sta. 476+37
87.0' Rt
Elev. 132.8'

4/10/97



LEGEND :

- SP, Poorly graded sands, sand-silt mixtures.
- SP-SM, Poorly graded sands and gravelly sands, to silty sands, sand-silt mixtures.

NOTES :

Numbers to the left of borings indicate SPT values for 12" penetration. (Unless otherwise noted.)

Design parameters based on SPT Borings performed at the subject intersection.

All Elevations based on BM - 51

▽ - Water Table

Type Rig - CME 75

Hammer used - CME Automatic

B- - Boring location

○ - Pole location

BENCHMARK LOCATION DESCRIPTION :

2.0 miles South of the Intersection of US 27 and SR 64.

BENCHMARK DESCRIPTION :

Standard F.D.O.T. concrete monument with brass disc.

Granular Materials- Relative Density	SPT (Blows/Ft)
Very Loose	Less than 4
Loose	4 - 10
Medium or Compact	10 - 30
Dense	30 - 50
Very Dense	Greater than 50

Silts and Clays- Consistency	SPT (Blows/Ft)
Very Soft	Less than 2
Soft	2 - 4
Firm	4 - 8
Stiff	8 - 15
Very Stiff	15 - 30
Hard	Greater than 30

$$$$$$$SYTIME$$$$$$$ $$$$$$$DGNSPECIFICATION$$$$$$$

REVISIONS					
Date	By	Description	Date	By	Description

	Names	Dates
Drawn by	DML	5/97
Checked by	MJB	5/97
Designed by		
Checked by		
Approved by	T.N. Puckett	

ENGINEER OF RECORD:
MATERIALS OFFICE
DISTRICT 1
801 N. Broadway
Bartow, Florida 33830-1249

LOGO:

SEAL:
Thomas Puckett
11/17/98

FLORIDA DEPARTMENT OF TRANSPORTATION
MATERIALS OFFICE

ROAD NO.	COUNTY	PROJECT NO.
25	Highlands	09030-3501

SHEET TITLE: Report of Core Borings

Drawing No. 1

PROJECT NAME: SR 25 (US 27) at College Road/ Bill Sachsenmaier Memorial Road (Signals)

Index No.

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